AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. – 18. (cancelled)

19. (currently amended) A pathogen detection system comprising:

a vessel for containing a culture medium and for the introduction of a sample to be tested;

a bio-sensor including an array of bio-sensor elements permanently residing in the vessel, said bio-sensor having a coating for attracting at least one pathogen expected in the sample;

a detection circuit responsive to the bio-sensor for indicating the presence of a pathogen on the bio-sensor;

an electrical connection between the bio-sensor and the detection circuit to link the bio-sensor to the detection circuit; and

a seal between the vessel and the electrical connection for sealing the vessel.

20. (cancelled)

21. (currently amended) The system of claim ~~20~~ 19 in which each bio-sensor element has a different coating for attracting pathogens.

22. (previously presented) The system of claim 19 in which the detection circuit is configured to drive the bio-sensor over a range of predetermined frequencies and further configured to detect a shift in frequency over time due to the attached pathogen.

23. (previously presented) The system of claim 19 in which the detection circuit is external to the vessel.

24. (previously presented) The system of claim 22 in which the range of predetermined frequencies is near the resonant frequency of the bio-sensor.

25. (previously presented) The system of claim 19 in which the detection circuit is configured to drive the bio-sensor at a predetermined frequency and further configured to detect a shift in frequency due to the attached pathogen.

26. (previously presented) The system of claim 25 in which the predetermined frequency is the resonant frequency of the bio-sensor.

27. (previously presented) The system of claim 24 in which the shift in frequency is a shift in the resonant frequency of the bio-sensor.

28. (previously presented) The system of claim 26 in which the shift in frequency is a shift in the resonant frequency of the bio-sensor.

29. (previously presented) The system of claim 19 in which the detection circuit is configured to continuously drive the bio-sensor over a range of predetermined frequencies and further configured to detect a shift in frequency over time due to the attached pathogen.

30. (previously presented) The system of claim 19 in which the detection circuit is configured to drive the bio-sensor over a range of predetermined frequencies and further configured to instantaneously detect a shift in resonant frequency due to the attached pathogen.

31. (previously presented) The system of claim 19 in which the detection circuit is configured to continuously drive the bio-sensor at its resonant frequency and further configured to detect a shift in frequency due to the attached pathogen.

32. (previously presented) The system of claim 19 in which the detection circuit is configured to drive the bio-sensor at its resonant frequency and is further configured to instantaneously detect a shift in frequency due to the attached pathogen.

33. (previously presented) The system of claim 19 in which the electrical connection is comprised of electric wire.

34. (previously presented) The system of claim 19 in which the electrical connection is comprised of a cable.

35. (previously presented) The system of claim 19 in which the detection circuit is configured to drive the bio-sensor at a predetermined frequency and further configured to instantaneously and continuously detect a shift in frequency due to the attached pathogen.

36. (previously presented) The system of claim 19 in which the seal is at the top of the vessel.

37. (previously presented) The system of claim 19 in which the seal is at the bottom of the vessel.